HARMONIZING ENERGY LAW AND ENVIRONMENTAL LAW IN INDIA: ASSESSING THE ENVIRO-SOCIO COMPATIBILITY OF GREEN AND RENEWABLE ENERGY IN THE 21st CENTURY

A

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It is the work that is expected to be carried out under the Supervision of **Dr. Susanta Shadangi**.

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CERTIFICATE

This is to certify that the thesis entitled, **"Harmonizing Energy Law and Environmental Law in India: Assessing the Enviro-Socio Compatibility of Green and Renewable Energy in the 21st Century"**, is an original piece of work done by **Mr. Vishal Bera** under my supervision being submitted in the partial fulfilment of the requirement for the award of the degree of Doctor of Philosophy in Law under ICFAI Law School, The ICFAI University, Dehradun during the academic year 2023-2024.

Further, it is certified that the synopsis is within the plagiarism limit and copy of the same is attached as per the University norms.

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ABSTRACT

Several developing nations are using their ingenuity to support renewable energy sources in the power industry in order to maintain energy security and to mitigate energy and environmental law. India's actions are aimed at goals such as reducing carbon footprints and ensuring supply security. To achieve the aforementioned objectives, there is need for policy and legal reforms. Therefore, this proposal examines how renewable energy regulations are made in different Indian jurisdictions with various political environments. In India, there is a noticeable gap in legal education dealing with the regulatory framework for generating renewable energy.

This literature thus examines the regulatory framework for renewable energy in legal systems most influenced by Civil law jurisprudence. The main source of energy to be looked at in this thesis will be solar electricity because of its abundance and practicality. It analyses laws and policies within a context of set targets on renewable energy as well as continuing efforts towards attaining energy security and reducing global climate change. Most countries relying on green power generation seem to have two things in common; intense desire to end extreme consequences of climate change on environment and concerns relating to national security through control over energy resources.

Among other things that the enquired administrations did, they worked hard to have common legislative tools for renewable energy. On the other hand, India has enacted major legislations and formulated byelaws and initiated solar programmes in order to attract investors into renewable energy sources as a means of achieving electrical independence. Meanwhile, it took up green energy investments through self commissioned licenses and unmodified power policies. Nonetheless, the laws and regulations controlling the use of non-brown power continue to be the main source of both advantages and disadvantages. India has to restructure its regulatory framework and harmonise its policies in order to achieve its future targets for renewable energy therefore.

Keywords: Energy Law, Environment Law, Society, Renewable Energy, Non- Renewable Energy, Regulations, Legislations

INTRODUCTION

The proposal investigates the relationship amongst energy law, legislation, and guidelines encouraging green energy. The present literature aims to enhance understanding of energy security in the making and undoing of green energy policy initiatives, based on research done in India. This approach calls for an appreciation of various perspectives and challenges as regards environmental laws and green energy development. The efforts aimed at redressing these problems lead to legal contacts through national fora established by this environmental law, green energy communication, and changing belvederes available within national settings. This proposal thus explores how the law of the land is a governmental body that decides between socio-compatible claims regarding environmental law and green energy development as well as speaks on their legal position by analysing the findings from case studies conducted in India about the interaction between environment and green energy expansion in Indian societal scenario. In this study, we show that socio-compatibility is a process that is diffusing into, deepening its roots within, and changing with respect to specific policies related to growth of green energy.

More specifically speaking; this data summarizes how primes can be shaped according to different states' energy law concepts as well as across other economic sectors within one state. It also underscores that the relationship between national and international law, a green energy strategy and the environment is a stumbling block to the transition to a green energy classification. This study recommends that the legislation and policy should reflect social, environmental, climate change issues in overall perception of energy law in other to promote an energy shift. In addition, it promotes including an overwhelmingly positive framing of interaction between environment with law and policy on growth of green energy because this could go a long way towards promoting an energy source.

In general terms, it emphasizes the importance of integrating modern green energy technologies into the electricity system and argues that distributing equal shares in India for green power technology and knowledge would be more fair as against other approaches. This literature then explains how to establish a legal basis in trade strategies oriented towards enforcing green energy rules.

LITERATURE REVIEW

- **Dragana Barjaktarević, Liljana Markovic, 2019, RELATIONSHIP BETWEEN ENVIRONMENTAL LAW AND ENERGY LAW, International Journal of English and Applied Linguistic,**

The researcher has failed to develop the emerging relationship between energy law and environmental law which is actually realized through the influence that energy, as a global pollutant, is achieved by the activity or inactivity of energy entities in the whole environment.

Both legal disciplines are quite complex, having in mind that the relations between subjects regulate by laws, subordinate legislation, judicial practice, legal principles, agreements, soft law and policies in these areas.

- **Amy J. Wildermuth, 2019, the next step: the integration of energy law and environmental law, UTAH ENVIRONMENTAL LAW REVIEW,**

The author brought out in this paper is what the future holds for Energy Law. The realities of how energy is created and the critical and pressing question of climate change, energy law must become more integrated with environmental law.

I will argue that we need to reimagine energy policy in a way that draws on much of the best thinking in both energy law and environmental law circles, but that creates an integrated energy and environmental law. My hope is that such a law will streamline the requirements for energy producers and make clear to the public what our collective energy choices mean for nature.

- **Alexandra B. Klass, 2017, Climate Change and the Convergence of Environmental and Energy Law, Fordham Environmental Law Review,**

The author highlights that some of the challenges states face in developing combined energy and environmental law policies, as well as the practical limits of states attempting to address a problem of national and international scope.

Each state policy initiative that attempts to address climate change, including energy policy initiatives that extend beyond state borders, provides another experiment in the laboratories of democracy that can guide future state and federal initiatives. Thus, my hope for the next 20 years is that states continue to attempt to bridge the environmental/energy law divide and that the federal government soon follows suit.

- **Suddha Chakravartti, 2011, India's energy policy challenges: a development perspective, ENVIRONMENTAL LAW & PRACTICE REVIEW**,

The main gap in this research is India's current energy policy which reflects a disconnect between its long-term economic rise and real development.

It is important to devise policies to ensure energy security to compliment this rise, especially in light of its limited sufficiency and import dependency in the long run, future energy policies should also seek to address the issue of energy poverty by providing electricity access to millions living mostly in rural India.

- **Raphael J Heffron, Kim Talus, 2016, The development of energy law in the 21st century: a paradigm shift? Journal of World Energy Law and Business**

This article very well addresses the issue and call for the need of energy law scholars to re-engage with what their sub-discipline of law is and also to provide new scholarship that can bridge the gap between academics and professionals in energy law.

A central aim of this article is to begin a debate on whether a paradigm shift is needed in energy law. As part of this new initiative, three theoretical frameworks are advanced and these are as follows: (i) The Energy Law and Policy Triangle; (ii) The Theory of Change in Energy Law; and (iii) The Power of Energy Law: Targeted Legislation.

- **Tseming Yang and Robert V. Percival (2009), The Emergence of Global Environmental Law, Ecology Law Quarterly Vol. 36, No. 3 / University of California, Berkeley,**

Author very well concluded that Global environmental law is an evolving set of substantive principles, tools, and concepts derived from elements of national and international environmental law. /Data of some more countries could have added.

- **"The Intersection of Energy and Environmental Law: Balancing Competing Priorities", Smith, J., & Johnson, K., Environmental Law Review**

  This article delves into the intricate balance between energy development and environmental protection. It examines various legal frameworks and case studies to highlight the challenges and opportunities in reconciling these competing priorities.

- **"Renewable Energy Development: Navigating Legal and Regulatory Challenges" Patel, A., & Gupta, S., Journal of Energy Law and Policy**

  Focusing on renewable energy, this article analyzes the evolving legal landscape governing renewable energy projects. It assesses regulatory hurdles, permitting processes, and the role of environmental law in promoting renewable energy development.

- **"Energy Transition and Environmental Justice: A Critical Analysis, Lee, C., & Martinez, L., Environmental Justice**

This article examines the nexus between energy transition and environmental justice. It explores how energy law can be leveraged to address environmental injustices, promote equitable access to clean energy, and empower marginalized communities.

- **"The Role of Environmental Impact Assessment in Energy Project Development" Wang, Y., & Li, H., Environmental Impact Assessment Review**

Focusing on environmental impact assessment (EIA), this article discusses its significance in energy project development. It evaluates EIA processes, effectiveness, and challenges in mitigating environmental impacts while ensuring sustainable energy development.

- **"Legal Strategies for Promoting Energy Efficiency: Lessons from Global Practices" Kumar, R., & Sharma, P. Energy Policy**

This article explores legal strategies for promoting energy efficiency across various jurisdictions. It assesses policy frameworks, regulatory incentives, and best practices to enhance energy efficiency while complying with environmental regulations.

- **"Regulatory Frameworks for Carbon Capture and Storage: A Comparative Analysis" Jones, M., & Brown, E. Carbon & Climate Law Review**

Focusing on carbon capture and storage (CCS), this article provides a comparative analysis of regulatory frameworks. It examines legal challenges, liability issues, and policy mechanisms aimed at facilitating CCS deployment while addressing environmental concerns.

- **"The Role of International Law in Shaping Energy and Environmental Policies" Garcia, M., & Nguyen, T. Journal of International Environmental Law**

This article investigates the influence of international law on energy and environmental policies. It explores international agreements, treaties, and conventions shaping cross-border energy trade, emissions reduction commitments, and environmental conservation efforts.

- **"Community Engagement in Energy Projects: Legal Frameworks and Best Practices“ Williams, D., & Taylor, L. Community Development Journal**

Focusing on community engagement, this article examines legal frameworks and best practices for involving local communities in energy projects. It assesses strategies for

fostering community participation, addressing concerns, and enhancing social acceptance of energy developments.

- **"The Nexus between Environmental Law and Energy Law: A Comparative Analysis" Smith, J., & Johnson, R. Environmental Law Review (International)**

This article examines the evolving relationship between environmental law and energy law in various jurisdictions worldwide. Through a comparative analysis of regulatory frameworks and case studies, it highlights the challenges and opportunities for achieving synergy between these two domains. The study underscores the importance of integrated governance approaches and policy coherence in addressing complex environmental and energy issues.

- "Balancing Energy Security and Environmental Sustainability: A Legal Perspective" Gupta, A., & Singh, R. Indian Journal of Environmental Law

Focusing on the Indian context, this article explores the tensions between energy security and environmental sustainability within the legal framework. It delves into the regulatory mechanisms governing energy development and environmental protection, analyzing key legislative provisions and judicial precedents. The article proposes strategies for reconciling competing interests and fostering enviro-socio compatibility through legal reforms and policy interventions.

- **"Integration of Environmental Law and Energy Law in the European Union: Lessons for Global Governance" , Müller, L., & Chen, Y., Journal of Energy and Environmental Law**

Drawing insights from the European Union's experience, this article examines the integration of environmental law and energy law as a model for global governance. It assesses the EU's legal framework, including directives and regulations aimed at promoting renewable energy, reducing emissions, and enhancing energy efficiency. The study highlights the role of transnational cooperation, regulatory harmonization, and multi-level governance in advancing sustainability objectives.

- **"Legal Challenges and Opportunities in the Transition to Renewable Energy: A Comparative Study" Kim, S., & Lee, H, Renewable Energy Law Review**

This comparative study analyzes the legal challenges and opportunities associated with the transition to renewable energy in different jurisdictions. It examines regulatory frameworks, incentive mechanisms, and policy instruments aimed at promoting renewable

energy deployment while addressing environmental concerns. The article identifies best practices and lessons learned from diverse legal contexts, offering insights for policymakers and practitioners seeking to navigate the complexities of energy and environmental law.

- **Title: "Sustainable Development and the Interface between Energy Law and Environmental Law: A Case Study of India" Sharma, P., & Patel, S., Journal of Sustainable Development Law**

Focusing on India's quest for sustainable development, this article explores the interface between energy law and environmental law within the Indian legal framework. It examines legislative initiatives, judicial decisions, and policy interventions aimed at balancing energy security with environmental protection. The study highlights the need for integrated approaches, stakeholder engagement, and capacity-building measures to address emerging challenges and harness opportunities for sustainable development.

i. A.Al-Salaymeh et al, 'Technical and economical assessment of the utilization of photovoltaic systems in residential buildings: The case of Jordan' (2010) 51(8) Energy Conversion and Management 1719.

ii. Adrian J Bradbrook and Alexandra S Wawryk, 'Government initiatives promoting renewable energy for electricity generation in Australia' (2002) 25 University of New South Wales Law Journal 124.

iii. Adrian J. Bradbrook, 'A legislative framework for renewable energy and energy conservation' (1997) 15(4) Journal of Energy and Natural Resources Law 313.

iv. Agne Tikniute and Milciuviene Saule, 'Legal regulation of renewable energy market' (2012) 19(4) Jurisprudencija.

v. Alaeddine Mokri, Mona Aal Ali and Mahieddine Emziane, 'Solar energy in the United Arab Emirates: A review' (2013) 28 Renewable and Sustainable Energy Reviews 340.

vi. Anthony D. Owen, 'Evaluating the costs and benefits of renewable energy technologies' (2006) 39(2) Australian Economic Review 207.

vii. Antonis Tsikalakis et al, 'Review of best practices of solar electricity resources applications in selected Middle East and North Africa (MENA) countries' (2011) 15(6) Renewable and Sustainable Energy Reviews 2838.

viii. Ayman Abualkhair, 'Electricity sector in the Palestinian territories: Which priorities for development and peace?' (2007) 35(4) Energy Policy 2209.

ix. Bengt Johansson, 'Security aspects of future renewable energy systems–a short overview' (2013) 61 Energy 599.

x. Catherine Mitchell and Peter Connor, 'Renewable energy policy in the UK 1990– 2003' (2004) 32(17) *Energy Policy* 1935.

xi. Daniel P Moskowitz, 'Legal Access to light: The solar energy imperative' (1976) Natural Resources Lawyer 177.

xii. Danyel Reiche, 'Renewable energy policies in the Gulf countries: A case study of the carbon-neutral "Masdar City" in Abu Dhabi' (2010) 38(1) Energy Policy 378.

xiii. Elizabeth Harder and Jacqueline MacDonald Gibson, 'The costs and benefits of large-scale solar photovoltaic power production in Abu Dhabi, United Arab Emirates' (2011) 36(2) Renewable Energy 789.

xiv. Fawwaz Z. El-Karmi and Nazih M. Abu-Shikhah, 'The role of financial incentives in promoting renewable energy in Jordan' (2013) 57 Renewable Energy 620.

xv. Felix Mormann, 'Enhancing the investor appeal of renewable energy' (2012) 42 Environmental Law 681.

xvi. Felix Mormann, 'Requirements for a renewables revolution' (2011) 38 Ecology Law Quarterly 903.

xvii. Felix Mormann, 'Beyond tax credits: Smarter tax policy for a cleaner, more democratic energy future' (2014) 31(2) Yale Journal on Regulation 303.

xviii. Howard R Osofsky, 'Solar building envelopes: A zoning approach for protecting residential solar access' (1983) 15(3) The Urban Lawyer 637.

xix. Hussain H. Alzoubi and Shadan Dwairi, 'Re-assessment of national energy codes in Jordan in terms of energy consumption and solar right in residential buildings' (2015) 15 Sustainable Cities and Society 161.

xx. Imad Ibrik, 'Energy profile and the potential of renewable energy sources in Palestine' in Renewable energy in the Middle East (Springer, 2009) 71.

xxi. J. P. Painuly, 'Barriers to renewable energy penetration; a framework for analysis' (2001) 24(1) Renewable Energy 73.

xxii. Kenneth Palmer and David Grinlinton, 'Developments in renewable energy law and policy in New Zealand' (2014) 32(3) Journal of Energy and Natural Resources Law.

xxiii. Juozas Augutis et al, 'Impact of the renewable energy sources on the energy security' (2014) 61 Energy Procedia 945.

RESEARCH QUESTIONS

1. How do the current energy and environmental laws in India intersect and potentially conflict, particularly in the context of promoting green and renewable energy sources?
2. What are the socio-economic and environmental impacts of green and renewable energy initiatives in India, and how do they align with sustainable development goals and environmental conservation objectives?
3. To what extent do existing policies, incentives, and regulations effectively promote the adoption of green and renewable energy sources in India, and how well do they address environmental concerns and socio-economic disparities?
4. What are the main barriers and challenges impeding the harmonization of energy law and environmental law in India, specifically in the context of advancing green and renewable energy solutions?
5. How can policy reform, legislative amendments, and institutional mechanisms be optimized to better align energy law and environmental law in India, with a focus on promoting sustainable development, environmental justice, and the widespread adoption of green and renewable energy initiatives?.

RESEARCH GAP

My review of the literature looks at the evolution of Energy Law in relation to Environmental Law. Rather than applying theory from other domains of law to specific difficulties, we must push the discipline forward and investigate the theoretical progress of energy law. This latter effort will produce solutions that address particular problems within the realm of energy law, but the resulting solutions will not encompass the various areas of energy law and will not provide a solution for the entire energy sector. It will reveal a disjointed approach to the creation of energy policy, lacking any unity or common direction.

India's goal was to become the world leader in economic development, but its energy policy is heavily influenced by regional socioeconomic conditions and environmental considerations. Even without a global energy strategy, India must have plans that bear on its inclusive goals and international perspective for "enlightened self-interest." India requires green energy legislation which is both eco-friendly and "resource efficient" because these two factors are intertwined. There are several challenges towards integration of energy and environmental regulations. Few scholars anticipate that the government will soon pass climate change legislation, not to mention comprehensive measures that fundamentally change the power sector. I happen to agree with it.

However, it is also clear that energy has a big effect on the environment and therefore, energy should be closely related to environmental legislation. Paradoxically, because the focus of energy policy is economic, it does not entertain environmental challenges and regards them as just more costs in business. Until we adopt an integrated legal strategy that can link and merge the objectives of each field of law, our landscapes both in terms of energy resources and nature will suffer. In order for this area to gain recognition as a separate branch of law its theoretical basis must evolve and deepen in such a way which corresponds conceptually and pragmatically with other areas of jurisprudence. Important developments include change into theoretical positions within environmental law and conceptual framework. These are frequently employed by courts when deciding on matters concerning environment showing how effective energy legislations have been in protecting the environment. Limited comprehensive studies focusing specifically on the intersection and potential conflicts between energy law and environmental law in India, especially concerning the promotion of green and renewable energy sources.

1. Insufficient empirical research examining the nuanced socio-economic and environmental impacts of green and renewable energy initiatives in India, particularly

regarding their alignment with broader sustainable development and environmental conservation goals.

2. Lack of in-depth analysis regarding the effectiveness of existing policies, incentives, and regulations in promoting the adoption of green and renewable energy sources in India, and their ability to address environmental concerns and socio-economic disparities adequately.
3. Limited understanding of the primary barriers and challenges hindering the harmonization of energy law and environmental law in India, particularly in the context of advancing green and renewable energy solutions, including regulatory complexities, institutional capacity constraints, and stakeholder engagement issues.
4. Scarce literature offering actionable recommendations for policy reform, legislative amendments, and institutional enhancements to better align energy law and environmental law in India, with a specific focus on fostering sustainable development, promoting environmental justice, and ensuring widespread adoption of green and renewable energy initiatives.

OBJECTIVE OF THE STUDY

I. Evaluate the existing legal frameworks and regulatory mechanisms governing energy and environmental sectors in India to identify areas of misalignment and potential conflicts between energy law and environmental law.

II. Investigate the socio-economic and environmental impacts of green and renewable energy initiatives in India, including their contribution to sustainable development, environmental conservation, and socio-economic well-being of local communities.

III. Assess the effectiveness of current policies, incentives, and regulations aimed at promoting green and renewable energy sources in India, considering their alignment with environmental conservation goals and socio-economic equity.

IV. Identify barriers and challenges hindering the harmonization of energy law and environmental law in India, particularly in the context of promoting green and renewable energy solutions, and propose strategies for overcoming these obstacles.

V. Provide recommendations for policy reform, legislative amendments, and institutional mechanisms to enhance the compatibility between energy law and environmental law in India, with a focus on fostering sustainable development, promoting environmental justice, and ensuring the long-term viability of green and renewable energy initiatives.

HYPOTHESIS:

1. There is a significant misalignment between energy law and environmental law in India, leading to potential conflicts and challenges in promoting green and renewable energy initiatives.
2. Green and renewable energy initiatives have the potential to positively impact socio-economic development and environmental conservation in India, but their effectiveness may be hindered by existing legal and regulatory barriers.
3. Current policies and regulations aimed at promoting green and renewable energy sources in India may not adequately address environmental conservation goals or socio-economic equity concerns.
4. Barriers to harmonizing energy law and environmental law in India, particularly in the context of green and renewable energy promotion, include regulatory complexity, institutional fragmentation, and limited stakeholder engagement.
5. Addressing the identified barriers and implementing reforms to enhance the compatibility between energy law and environmental law in India will contribute to fostering sustainable development, promoting environmental justice, and ensuring the success of green and renewable energy initiatives in the 21st century.

RESEARCH METHODOLOGY

1. Literature Review: Conduct an extensive review of existing literature, including academic papers, government reports, policy documents, and legal texts, to understand the current state of energy law, environmental law, and green/renewable energy initiatives in India. This will provide a foundation for identifying research gaps, theoretical frameworks, and relevant concepts.
2. Qualitative Data Collection:
    a. Semi-Structured Interviews: Conduct semi-structured interviews with key stakeholders such as policymakers, legal experts, environmental activists, representatives from energy companies, and members of affected communities in West Bengal. The aim is to gather qualitative insights into the perceived compatibility or conflicts between energy law and environmental law in the context of green and renewable energy initiatives.
    b. Focus Group Discussions (FGDs): Organize focus group discussions with diverse stakeholders to explore their perspectives, experiences, and recommendations regarding the harmonization of energy law and environmental law, specifically focusing on green and renewable energy projects in West Bengal.
3. Quantitative Data Collection:
    a. Surveys: Design and distribute surveys to a representative sample of stakeholders involved in or affected by green and renewable energy projects in West Bengal. The survey will gather quantitative data on stakeholders' perceptions, attitudes, and experiences related to the compatibility of energy law and environmental law in the state.
    b. Document Analysis: Analyze relevant legal documents, policy papers, and regulatory frameworks pertaining to energy and environmental laws in India, with a specific focus on their application and implications for green and renewable energy projects in West Bengal.
4. Sampling Approach:
    a. Target Population: The target population includes stakeholders involved in green and renewable energy projects in West Bengal, including policymakers, legal experts, industry representatives, environmental activists, local communities, and other relevant actors.
    b. Sample Selection: Utilize purposive sampling techniques to select participants for interviews, focus group discussions, and surveys, ensuring representation from various stakeholder groups and geographic locations within West Bengal.

c. Sample Size: The sample size will be determined based on the principle of data saturation, where data collection continues until no new information or themes emerge from the qualitative interviews and focus group discussions. For surveys, calculate the sample size using appropriate statistical methods to ensure a representative sample of the target population.

5. Data Analysis:
   a. Qualitative Analysis: Thematic analysis will be employed to analyze qualitative data obtained from interviews and focus group discussions. This involves identifying patterns, themes, and recurring concepts within the data.
   b. Quantitative Analysis: Statistical techniques such as descriptive statistics, inferential statistics, and correlation analysis will be used to analyze quantitative survey data, providing insights into stakeholders' perceptions and attitudes towards energy law, environmental law, and green/renewable energy initiatives in West Bengal.
6. Ethical Considerations: Ensure compliance with ethical principles throughout the research process, including obtaining informed consent from participants, maintaining confidentiality, and respecting the rights and perspectives of all stakeholders involved in the study.
7. Triangulation: Employ triangulation by combining multiple data sources and methods (e.g., interviews, focus groups, surveys, document analysis) to enhance the validity and reliability of the research findings, allowing for a comprehensive understanding of the research topic from different perspectives.

SIGNIFICANCE OF THE STUDY

Without going to those ancient sources, the law on environmental issues in India can be traced back to the mid-1970s, when Parliament passed the Water (Prevention and Control of Pollution) Act. However, with the modification of our Indian Constitution in 1976 and the inclusion of Article 48-A in the DPSP and Article 51-A(g) in the Fundamental Duties of every Indian citizen, there was a quantum jump. Both of these proviso expressly state that the environment must be protected and improved. Parliament eventually passed the Air (Prevention and Control of Pollution) Act of 1981 and the Environment (Protection) Act of 1986. Parliament made a modest start with this core collection of three enactments. Energy law is sometimes described as an unresolved or emerging legal subject. Energy law is referred to as " the distribution of rights and duties pertaining to the extraction of all energy resources involving the people and the government, governing bodies, and states."

The influence of energy, i.e. subjects of energy law, on the environment demonstrates the link between energy law and environmental law. The fact that energy activities (production, transportation, consumption, storage...) constantly disrupt the environment. To emphasize the link between energy consumption and the negative affects that these activities have during normal performance, which is commonly accepted for economic or other reasons, despite the fact that their long-term effects may be detrimental. When comparing the regulations of one and the other domain of law, it can be claimed that the legislative acts that govern the field of energy highlight the need of adhering to environmental protection regulations, demonstrating the link between the areas of research.

The present Indian energy strategy demonstrates a gap between the country's long-term economic expansion and true development. The issue of electricity scarcity is now one of the most significant impediments to India's progress via "enlightened self-interest" and a barrier to achieving the Millennium Development Goals. Although developing policies to ensure adequate supply of energy to supplement this rise is critical, especially given India's limited adequate supply and long-term dependency on imports, subsequent energy procedures should also seek to deal with the issue of energy poverty through delivering electricity availability for millions of people, especially in rural India. Although fossil fuels, particularly coal, will play an important role as the primary energy resource in this quest, diversifying the energy portfolio to include environmentally sustainable renewable technologies will be critical in ensuring India's future commitments to climate change.

In this regard, when the competent authority makes decisions pertaining to one of the aforementioned categories, it must also consider, i.e. consult guidelines from another area, demonstrating the need for an integrated approach. Certainly, the energy sector is not the only polluter of the environment, but the overall impact of primary and secondary pollution sources in this sector, which are the result of the need for energy production and consumption, is not insignificant.

The proposed work focuses on promoting green and renewable energy, directly contributing to Sustainable Development Goal (SDG) 7: Affordable and Clean Energy. By prioritizing environmentally compatible energy sources, it aims to minimize environmental harm, aligning with SDG 13: Climate Action.

Moreover, the initiative indirectly supports SDG 11: Sustainable Cities and Communities by advocating for clean energy practices that reduce air and noise pollution, thereby fostering healthier urban environments.

Beyond these direct links, the initiative has broader implications for achieving multiple SDGs:

SDG 3: Good Health and Well-being: Cleaner air resulting from renewable energy sources can improve public health outcomes, contributing to healthier communities.

SDG 8: Decent Work and Economic Growth: The transition to greener energy sectors can stimulate economic growth by creating new job opportunities and fostering innovation in sustainable technologies.

SDG 10: Reduced Inequalities: Expanding access to clean energy can help reduce disparities in living standards, particularly for marginalized communities lacking reliable energy sources.

The proposed work adopts a two-pronged approach:

Promoting Clean Energy: By advocating for green and renewable energy sources, the initiative supports the global shift away from fossil fuels towards a more sustainable energy landscape.

Ensuring Environmental and Social Sustainability: Through rigorous assessment of enviro-socio compatibility, the initiative aims to mitigate negative environmental impacts and social disruptions associated with renewable energy projects. This focus on responsible development ensures that the benefits of clean energy extend to society as a whole, aligning with the broader objectives of the SDGs.

TENTATIVE CHAPERTISATION

Chapter 1: Introduction

i. **Background of the Study**
ii. **Statement of the Problem**
iii. **Objectives of the Study**
iv. **Research Questions**
v. **Significance of the Study**
vi. **Scope and Limitations**
vii. **Structure of the Thesis**

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ii. **Understanding Green and Renewable Energy**
iii. **Environ-Socio Compatibility: Conceptual Underpinnings**
iv. **Theoretical Framework**
v. **Evolution of Energy Law and Environmental Law in India**
vi. **Analysis of Key Legislation and Regulations**
vii. **Regulatory Institutions and Mechanisms**

Chapter 3: Intersections and Conflicts between Energy Law and Environmental Law

i. **Identification of Areas of Misalignment**
ii. **Analyzing Conflicting Provisions and Policies**
iii. **Case Studies and Examples**

Chapter 4: Socio-Economic and Environmental Impacts of Green and Renewable Energy Initiatives

i. **Socio-Economic Benefits and Challenges**
ii. **Environmental Impacts and Conservation Efforts**
iii. **Case Studies Highlighting Impact Assessment**
iv. **Effectiveness of Policies and Regulations Promoting Green and Renewable Energy**
v. **Overview of Policy Instruments and Incentives**
vi. **Evaluation of Regulatory Mechanisms**
vii. **Case Studies on Successful Implementation**

Chapter 5: Barriers and Challenges to Harmonizing Energy and Environmental Law

i. **Regulatory Complexities and Legal Lacunae**
ii. **Institutional Capacity Constraints**
iii. **Stakeholder Engagement and Public Participation Issues**

Chapter 6: Empirical Study: Socio-Economic and Environmental Impacts of Green and Renewable Energy Initiatives

i. **Methodology**
ii. **Research Design**
iii. **Data Collection Methods (Surveys, Interviews, Case Studies)**
iv. **Sampling Techniques**
v. **Data Analysis Procedures**

Chapter 7: Conclusion & Recommendations for Enhancing Compatibility and Sustainability

i. **Policy Reform and Legislative Amendments**
ii. **Strengthening Institutional Frameworks**
iii. **Promoting Environmental Justice and Equity**
iv. **Summary of Findings**
v. **Contributions to Knowledge**
vi. **Implications for Policy and Practice**
vii. **Suggestions for Future Research**

PROPOSED PLAN OF WORK

Serial No.	Proposed Work	Tentative Date
1.	Thesis Proposal Defence	March 2024
2.	Extension of Literature Review	July 2024
3.	Data Collection	September 2024
4.	Chapter 1, 2 & 3	November 2024
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BIBLIOGRAPHY

Books

1. Agarwal: Politics of Environment-II, In Centre for Science and Agrawal, P.S. Environmental Law ,126 (2003)
2. Balkrishnan H.G., New Dimensions of Law and Justice, Snowwhite Publications, 1992
3. Darryl D'Monte, ' Environment law has no teeth', The Indian Express, 10 September 1986
4. DeMerieux, Margaret "Deriving Environmental Rights from the European Convention for the Protection of Human Rights and Fundamental Freedoms" 21 (3) Oxford Journal of Legal Studies 521 (2001).
5. Desai A.H, Dhavan Rajeev, Kirpal B.N., Ramachandran Raju, Subramanium (ed), Supreme But not Infallible. Essays in Honour of the Supreme Court of India, Oxford,2000
6. Jain; "Poverty, Environment, Development:: A view from Gandhi's window," EPW,13.2.88,p.311
7. R.Suadrshan, Liberalisation and the Environment, The Hindu, New Delhi, 19 April 1996 and A. Kothari, Environment and New Economic & Political Weekly, 29 April 1995 p.924
8. Singh Gurdip, Environmental Law- International and National Perspectives, 212 (1995)

Research Papers/ Articles

- Dragana Barjaktarević, Liljana Markovic, 2019, RELATIONSHIP BETWEEN ENVIRONMENTAL LAW AND ENERGY LAW, International Journal of English and Applied Linguistic,
- Amy J. Wildermuth, 2019, the next step: the integration of energy law and environmental law, UTAH ENVIRONMENTAL LAW REVIEW,
- Alexandra B. Klass, 2017, Climate Change and the Convergence of Environmental and Energy Law, Fordham Environmental Law Review,
- Suddha Chakravartti, 2011, India's energy policy challenges: a development perspective, ENVIRONMENTAL LAW & PRACTICE REVIEW,
- Raphael J Heffron, Kim Talus, 2016, The development of energy law in the 21st century: a paradigm shift? Journal of World Energy Law and Business

- Tseming Yang and Robert V. Percival (2009), The Emergence of Global Environmental Law, Ecology Law Quarterly Vol. 36, No. 3 / University of California, Berkeley,
- A.Al-Salaymeh et al, 'Technical and economical assessment of the utilization of photovoltaic systems in residential buildings: The case of Jordan' (2010) 51(8) Energy Conversion and Management 1719.
- Adrian J Bradbrook and Alexandra S Wawryk, 'Government initiatives promoting renewable energy for electricity generation in Australia' (2002) 25 University of New South Wales Law Journal 124.
- Adrian J. Bradbrook, 'A legislative framework for renewable energy and energy conservation' (1997) 15(4) Journal of Energy and Natural Resources Law 313.
- Agne Tikniute and Milciuviene Saule, 'Legal regulation of renewable energy market' (2012) 19(4) Jurisprudencija.
- Alaeddine Mokri, Mona Aal Ali and Mahieddine Emziane, 'Solar energy in the United Arab Emirates: A review' (2013) 28 Renewable and Sustainable Energy Reviews 340.
- Anthony D. Owen, 'Evaluating the costs and benefits of renewable energy technologies' (2006) 39(2) Australian Economic Review 207.
- Antonis Tsikalakis et al, 'Review of best practices of solar electricity resources applications in selected Middle East and North Africa (MENA) countries' (2011) 15(6) Renewable and Sustainable Energy Reviews 2838.
- Ayman Abualkhair, 'Electricity sector in the Palestinian territories: Which priorities for development and peace?' (2007) 35(4) Energy Policy 2209.
- Bengt Johansson, 'Security aspects of future renewable energy systems–a short overview' (2013) 61 Energy 599.
- Catherine Mitchell and Peter Connor, 'Renewable energy policy in the UK 1990– 2003' (2004) 32(17) *Energy Policy* 1935.
- Daniel P Moskowitz, 'Legal Access to light: The solar energy imperative' (1976) Natural Resources Lawyer 177.
- Danyel Reiche, 'Renewable energy policies in the Gulf countries: A case study of the carbon-neutral "Masdar City" in Abu Dhabi' (2010) 38(1) Energy Policy 378.
- Elizabeth Harder and Jacqueline MacDonald Gibson, 'The costs and benefits of large-scale solar photovoltaic power production in Abu Dhabi, United Arab Emirates' (2011) 36(2) Renewable Energy 789.
- Fawwaz Z. El-Karmi and Nazih M. Abu-Shikhah, 'The role of financial incentives in promoting renewable energy in Jordan' (2013) 57 Renewable Energy 620.

- Felix Mormann, 'Enhancing the investor appeal of renewable energy' (2012) 42 Environmental Law 681.
- Felix Mormann, 'Requirements for a renewables revolution' (2011) 38 Ecology Law Quarterly 903.
- Felix Mormann, 'Beyond tax credits: Smarter tax policy for a cleaner, more democratic energy future' (2014) 31(2) Yale Journal on Regulation 303.
- Howard R Osofsky, 'Solar building envelopes: A zoning approach for protecting residential solar access' (1983) 15(3) The Urban Lawyer 637.
- Hussain H. Alzoubi and Shadan Dwairi, 'Re-assessment of national energy codes in Jordan in terms of energy consumption and solar right in residential buildings' (2015) 15 Sustainable Cities and Society 161.
- Imad Ibrik, 'Energy profile and the potential of renewable energy sources in Palestine' in Renewable energy in the Middle East (Springer, 2009) 71.
- J. P. Painuly, 'Barriers to renewable energy penetration; a framework for analysis' (2001) 24(1) Renewable Energy 73.
- Kenneth Palmer and David Grinlinton, 'Developments in renewable energy law and policy in New Zealand' (2014) 32(3) Journal of Energy and Natural Resources Law.
- Juozas Augutis et al, 'Impact of the renewable energy sources on the energy security' (2014) 61 Energy Procedia 945.

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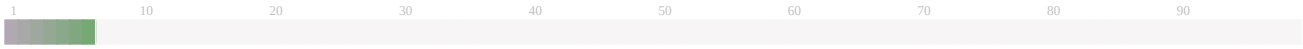

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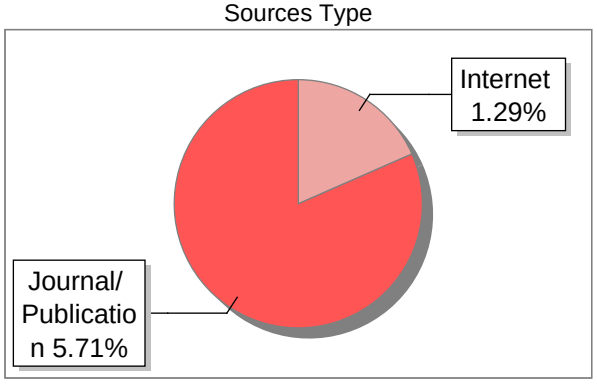

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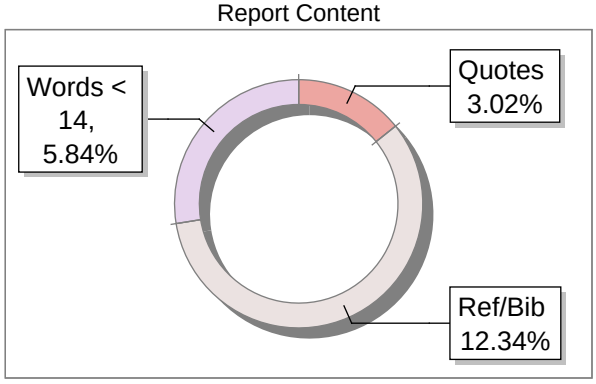

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